

Appl. No. 09/975,317
Amendment dated: August 22, 2005
Reply to OA of: December 22, 2004

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-75(canceled).

76(currently amended). A method as claimed in claim [[75]] 96 wherein said magnetic resonance imaging procedure is one capable of generating images with time intervals of less than 100 milliseconds.

77(currently amended). A method as claimed in claim [[75]] 96 wherein said imaging procedure is a gradient echo or echo planar imaging procedure.

78(previously presented). A method as claimed in claim 77 wherein said imaging procedure is an inversion recovery echo planar imaging procedure.

79(previously presented). A method as claimed in claim 77 wherein said imaging procedure is one in which TI (inversion time) is 100 to 800 msec.

80(currently amended). A method as claimed in claim [[75]] 96 wherein said manganese complex or salt thereof is administered at a dosage of 0.005 to 0.2 mmol/kg bodyweight.

81(previously presented). A method as claimed in claim 80 wherein said manganese complex or salt thereof is administered at a dosage of 0.01 to 0.05 mmol/kg bodyweight.

82(cancelled).

83(cancelled).

84(currently amended). A method as claimed in claim [[83]] 96 wherein in formula I:

R^5 is hydroxy, C_{1-8} alkoxy, ethylene glycol, glycerol, amino or C_{1-8} alkylamido;

X is a bond or a group selected from CH_2 , $(CH_2)_2$, CO , CH_2CO , CH_2CH_2CO or CH_2COCH_2 ;

Y is a bond;

R^6 is a mono- or poly(hydroxy or alkoxyated) alkyl group or a group of the formula $OP(O)(OR^8)R^7$; and

R^7 is hydroxy or an unsubstituted alkyl or aminoalkyl group.

85(currently amended). A method as claimed in claim [[83]] 96 wherein in formula I, R^3 is ethylene and each group R^1 represents $-CH_2COR^5$ in which R^5 is hydroxy.

86(currently amended). A method as claimed in claim [[83]] 96 in which the compound of formula I is N,N'-bis-(pyridoxal-5-phosphate)-ethylenediamine-N,N'-diacetic acid (DPDP) or N,N'-dipyridoxyl-ethylenediamine-N,N'-diacetic acid (PLED).

87(cancelled).

88(new). A method as claimed in claim [[75]] 96 75 wherein said magnetic resonance imaging procedure is carried out within a period of up to 6 hours after the administration of said complex or salt thereof to said body.

89(currently amended). A method as claimed in claim [[75]] 96 75 wherein the contrast medium further comprises calcium chelate complexes.

90(new). A method as claimed in claim [[75]] 96 75 wherein the contrast medium further comprises calcium or sodium salts.

91(previously presented). A method as claimed in claim 90 wherein the calcium salt comprises calcium chloride, calcium ascorbate, calcium gluconate or calcium lactate.

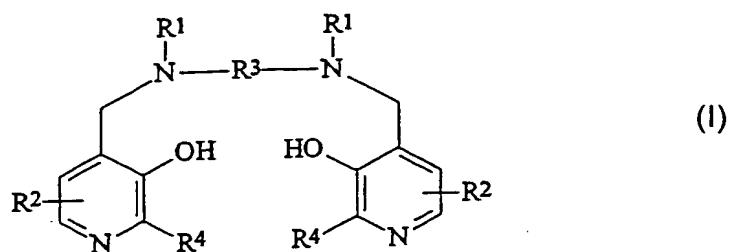
92(new). A method as claimed in claim [[75]] 96 75 wherein the contrast medium further comprises physiologically compatible buffers.

93(new). A method as claimed in claim [[75]] 96 75 wherein the contrast medium further comprises an antioxidant such as ascorbic acid or a reducing sugar.

94(cancelled).

95(cancelled).

96(new). A method of distinguishing viable myocardial tissue from necrotic (infarcted) tissue in a human or nonhuman body, said method comprising administering to said body a physiologically acceptable manganese complex wherein said manganese complex is a manganese chelate complex having a K_a value of from 10^7 to 10^{25} and a formula I:



or a salt thereof

(wherein in formula I

each R¹ independently represents hydrogen or -CH₂COR⁵;

R⁵ represents hydroxy, optionally hydroxylated alkoxy, amino or alkylamido;

each R² independently represents a group XYR⁶;

X represents a bond, or a C₁₋₃ alkylene or oxoalkylene group optionally substituted by a group R⁷;

Y represents a bond, an oxygen atom or a group NR⁶;

R⁶ is a hydrogen atom, a group COOR⁸, an alkyl, alkenyl, cycloalkyl, aryl or aralkyl group optionally substituted by one or more groups selected from COOR⁸, CONR⁸₂, NR⁸₂, OR⁸, =NR⁸, =O, OP(O)(OR⁸)R⁷ and OSO₃M;

R⁷ is hydroxy, an optionally hydroxylated, optionally alkoxylated alkyl or aminoalkyl group;

R⁸ is a hydrogen atom or an optionally hydroxylated, optionally alkoxylated alkyl group;

M is a hydrogen atom or one equivalent of a physiologically tolerable cation;

R³ represents a C₁₋₈ alkylene group, a 1,2-cycloalkylene group, or a 1,2-arylene group; and

each R⁴ independently represents hydrogen or C₁₋₃ alkyl);

at a dosage of 0.001 to 0.2 mmol/kg bodyweight, within a period of from 3 to 6 hours following administration of said complex or salt thereof subjecting said body to a magnetic resonance imaging procedure capable of generating images with time intervals of less than 0.5 seconds and thereafter providing a series of images of the myocardium of said body and distinguishing viable myocardial tissue from infarcted tissue; with the proviso that said manganese complex or salt thereof is the only contrast agent administered in said method.